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ABSTRACT

A study investigated the relationship between attendance and reading ability and the difference in attendance or reading ability attributed to gender or race. The measuring instrument was the Gates-MacGinitie Reading Tests. An interracial group comprised of 33 students, 18 males and 15 females, was placed in a semester-long reading improvement course offered by Admiral King High School in Lorain, Ohio. Tests were administered both at the beginning and end of the course. Using the Peason r, students' gain scores correlated positively with the number of days present in class. Results appeared to be independent of gender or race. (Three tables of data are included.) (KEH)

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A Correlational Study of Attendance and Gain Scores Using the Gates-MacGinitie Reading Tests

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Abstract

The major purpose of this study was to determine if there was a relationship between attendance and reading ability measured by the gain scores of the Gates-MacGinitie Reading Tests. Secondarily, it was to determine if there was a difference in attendance or reading ability attributed to gender or race. Using the Pearson r, students' gain scores correlated positively with the number of days present in class ($r = 45$, $P < .005$). Results appeared to be independent of gender or race (ANOVA = .083).

Introduction

The effects of school attendance on reading achievement have been of concern to educators and the public for some time. Both have recognized that school attendance is necessary for students to develop reading skills so they will not fall behind their peers, thus losing self-esteem and falling into a pattern of failure. To combat attendance problems some systems, such as Cleveland, Ohio, offer incentives to attend. There, some schools offer monthly pizza parties and others give jackets for perfect attendance (Rutti, 1989). In the 1987-1988 school year, high school students in Cleveland had 78.3 percent attendance. In nearby Lorain, Ohio, attendance for the same period was 85.4 percent; whereas, the average attendance rate for the state of Ohio was 94 percent (Rutti, 1989).

Many books and articles have been written about why students cannot read. Studies have indicated an alarmingly high illiteracy rate in the United States. Our technologically advanced environment demands that our workers be able to read. Studies have shown that school absence is a significant factor in reading achievement. When a student is not in school, he misses not only reading class instruction, but also reading throughout his content area classes. Reading

and reading-dependent work occur during much of the school day.

Although it would be impossible to eliminate absenteeism, many school systems are actively combating the problem and further research in this area is warranted. The bottom line appears to lie with the students' parents.

Statement of the Problem

The purpose of this study was to investigate whether the frequency of attendance predicts success in reading, using gain scores of Gates-MacGinitie Reading Tests. Additionally, it was to investigate whether there was a statistically significant difference in attendance or reading ability attributed to gender or race.

Review of Related Literature

Few people would argue that reading is a skill that is needed to get along in American society. One of the primary focuses of elementary school is to develop students into proficient readers (Pavic, 1985). Reading instruction continues in high school not only in reading classes, but also in all content areas. However, when students are not in school they are not being taught the special skills to deal with word

problems in mathematics or bar graphs in history, for instance.

Many school systems are addressing the issue of attendance. Saint Louis School District, Missouri, revamped their organization to include middle schools. Among the positive results were better school attendance and improved reading comprehension test scores (Wiles, 1982). Cleveland, Ohio, schools offer student incentives which are sponsored by local businesses. LTV Steel Company and Huntington National Bank gave jackets to 177 of 1,110 students at a high school for good attendance during an eight week time period. At another high school Ameritrust Company volunteers gave monthly pizza parties for the best and most improved homeroom attendance. To supplement this, these workers called homes at night on a monthly basis to help improve attendance for those missing school (Rutti, 1989).

Academic achievement is improved with good attendance. District studies of the Ganado Unified School District #20 in Arizona found that average yearly attendance appeared to be significantly correlated with reading achievement for sixth, eighth and twelfth grade students. Students with significantly higher scores had the best attendance

averages. School administrators have since used this information as a tool to sell their school program to the public (Boloz & Varrati, 1983).

In 1963 Carroll wrote that time is a central construct in the teaching-learning environment (Carroll, 1963). Time is related to aptitude in the amount of time an individual needs to master a skill. The teacher must provide time to master the skill, and the student must persevere or spend time mastering that skill. Thus, time on task and the time needed by the individual to learn are important factors in achievement. A longitudinal study on the relationship of absence and reading achievement was conducted by Easton and Engelhard. In this nine year study, student absence rates were significantly related to reading grades assigned by the teacher and standardized test scores (Easton & Engelhard, 1982).

Monk and Ibrahim (1984) looked at student absenteeism from dual points of view. First, they tentatively concluded that students with good attendance may be adversely affected by peers who are not in class. When the absent peers return, the teacher devotes additional time giving remediation to them, thus the learning process is slowed down for

those who had been present. Secondly, the effects of being absent on a given day may vary with the number of peers absent that same day. If many students are absent on a particular day, the teacher will most likely remediate for them. However, this may not hold true on a day of high attendance.

The research evidence strongly suggests that attendance has a significant effect in reading performance and academic achievement in general. Further, patterns of attendance may make absence more crucial. School systems are addressing attendance concerns by reaching beyond staff and students to the community and parents. Therefore, it was hypothesized that the greater the attendance, the greater the reading ability. Students are thus encouraged to spend more time reading.

Statement of the Hypothesis

In high school courses designed to improve reading, students exhibit a range of attendance from many days absent to few or none. What relationship can be found between attendance and reading gain scores in a group of such students? This study attempts to determine whether and to what degree a relationship exists between these variables. Secondarily, what is

the relationship between attendance or reading gain scores attributed to gender or race? The hypothesis is that there is a strong positive relationship between attendance and gain scores in reading, and this holds true regardless of race or gender.

Method

Subjects

The sample for this study was selected from all students who completed a one semester voluntary course designed to support reading improvement at Admiral King High School in Lorain, Ohio. The 33 students were placed in the course according to self-assessment of need, parental assessment, or teacher/guidance counselor referral. To be a part of the study, both the pretest and the posttest Gates-MacGinitie Reading Tests were completed. Four students who were absent during the posttest were not included in the study. This group was comprised of 18 males and 15 females. By self-report the racial groups were: 14 Caucasian, 10 Black, 8 Hispanic and 1 Native American Indian.

Admiral King High School is one of three high schools in Lorain, Ohio. This midwestern community is the eleventh largest in the state. Since there are 55 nationalities, Lorain has been termed "The International City." Lake Erie borders on its north, Cleveland is twenty-six miles east, and Toledo is ninety-one miles west. The school has a total enrollment of 1400 with 54% Caucasian, 33% Black American and 13% Hispanic. Twenty percent of its graduates attend a four year college and 25% enter a

two year one.

Instruments

The measuring instrument for this test was the Gates-MacGinitie Reading Tests, Level E, Form 2. The content validity is supported by the description of its development. Data for content validity was not available. However, estimates of its reliability are quite substantial for both the vocabulary and comprehension subtests. Using the Kuder-Richardson Formula 20, the vocabulary subtest was .92 and the comprehension subtest was .91. The Gates-MacGinitie Reading Tests are not for diagnosis, but they focus on general reading achievement (Cooter, 1989). They offer a quick ballpark figure of a student's achievement. They are completed in one class period of 55 minutes. Level E, form 2, has 43 comprehension questions that consist of choosing answers to short reading passages, while the vocabulary consists of identifying the meaning of 45 words, for which five choices are given to each one.

Procedure

The students were enrolled in this class from August 29, 1988, to January 20, 1989. The pretest Gates-MacGinitie was administered during the class

period on September 5, 1988. Students were scattered around the room and no aids such as dictionaries were permitted. The test was administered according to the guidelines in the teacher's manual. Students recorded their answers on self-scoring test forms that were purchased from the Houghton Mifflin Company. They were encouraged to change any incorrect answers. The score used in this study was the raw score, the composite of vocabulary and comprehension correct answers.

Students who were absent when the test was administered were given it during the next complete class period of attendance. Students who arrived to class tardy did not take it that day. Students who entered the course after this date took it on the next full day of class attendance.

The posttest was given following the same guidelines. It was administered one week before the semester long class concluded, on January 13, 1989. This way absent students had the opportunity to take it before they left the class. Students who did not complete the semester were not included in the study.

Attendance was carefully kept by the teacher, Kathleen Cintavey. A student was considered to be tardy to class if he had missed 15 minutes or less of

class. This would not be included in the total days absent. If he missed 16 to 30 minutes, he was marked half a day absent; with 31 or more minutes out of class he was marked absent for the day. Class ran 55 minutes, every day school was in session, for a total of 90 days. Absence was recorded in a teacher's record book.

Results

The gain scores from the Gates-MacGinitie Reading Tests were obtained for all subjects, as was the attendance. Examinations of raw scores, which are a student's total number of correct responses, and days present were done with the Pearson r tests. This indicated that there was a statistically significant relationship between attendance and reading achievement with these 33 subjects, ($r = .45$, $p < .005$). Tables 1 and 2 illustrate this.

Table 1

Means and Standard Deviations for Variables

Variable	Mean	STD DEV
Pretest	48.30	13.44
Posttest	55.15	12.25
Attendance	75.84	11.97
GAIN	6.84	7.54

n = 33

Table 2

Pearson Correlation Coefficient

Attendance	.4514 $p < .005$

When an Analysis of Variance (ANOVA) test was conducted with the posttest as the dependent variable and sex and race as the independent variable, no statistically significant difference was found, as illustrated in Table 3.

Table 3

Analysis of Variance by Posttest, Sex, Race with Pretest

	Sig of F
Main Effects	.585
Sex	.566
Race	.569
2-Way Interactions	.083
Sex Race	.083

This study indicated that the greater attendance a student had, the greater his gains were in reading achievement, even over a period of one semester. Furthermore, this success linked to attendance was not affected by race or sex. Any student in this same group who had taken advantage of the educational opportunity that was offered to him could have exhibited greater success in reading.

Discussion

The results of this study supported the research hypothesis that the frequency of attendance predicts success in reading and that this holds true regardless of sex or race. This study was, however, limited by the number of subjects who participated in it. A larger study would have been more representative of the student population.

A longitudinal study would have shown the correlation of attendance and reading success over time. To do this the subjects would have to remain in a school district for a long period of time. In this study four students did not take the posttest due to relocation in another school.

Finally, the subjects in this test were given no extrinsic motivation. There was no reward, such as a grade, for participation, nor were personal distractions such as family problems or physical ailments, such as headaches, taken into account. Future experimental research may consider optimum conditions for test taking.

The results of this study are consistent with the findings of Easton and Engelhard (1982) in the lower grades. Boloz and Varrati (1983) found the scores on an Indian reservation to be higher with better

attendance. The next logical step would be to better deal with getting and keeping students in school. Both Cleveland City Schools (Rutti, 1989) and Saint Louis City Schools (Wiles, Bondi, & Stodghill, 1982) are examples of systems that are attempting to tackle this problem. If parents were better informed on this issue and were more greatly involved in the solution to the problem, perhaps a positive change would be evident in attendance. Reading achievement would be greater and both students and society would benefit.

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